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ABSTRACT

ABSTRACTS OF 41 STUDIES IN AGRICULTURAL EDUCATION COMPLETED IN THE AMERICAN VOCATIONAL ASSOCIATION NORTH ATLANTIC REGION, IN THE YEARS 1968-69, ARE INCLUDED IN THIS MIMEOGRAPHED DOCUMENT. REPRESENTED ARE STAFF STUDIES, DOCTORAL DISSERTATIONS, AND MASTERS THESES. THE INDIVIDUAL ABSTRACTS INCLUDE THE PURPOSE, METHOD AND FINDINGS OF EACH STUDY. STUDIES FOR THE PREVIOUS YEAR ARE ANNOUNCED IN RESEARCH IN EDUCATION, APRIL 1969 AS ED 024 834. (DM)

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Ray Butler

ABSTRACTS OF RESEARCH STUDIES IN AGRICULTURAL EDUCATION COMPLETED IN 1968-69 IN THE NORTH ATLANTIC REGION

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APPLE, ROBERT A. Evaluation of the Sears, Roebuck Foundation Dairy Program in Snyder, Union and Northumberland Counties in Pennsylvania 1960-1968. Paper, M.Ed., 1969, The Pennsylvania State University. 54 pp. Library, the Pennsylvania State University, University Park.

Purpose--The objectives were to: (1) determine if the average milk production on a mature equivalent basis of the Sears Roebuck Foundation dairy animals received by agriculture students was higher than the average herd production on the farms where the animals were placed, (2) determine if growth as measured by heart girth and height at withers of the Sears animals was equal to the standard growth of dairy animals, (3) determine if milk production correlated with heart girth and wither height, (4) determine if the show placings of the Sears animals were equal to the other animals exhibited at the Rolling Green Youth Dairy Show, (5) determine the present occupations of vocational agriculture graduates who had received a Sears animal, (6) determine the farming status of the herd owners when the animals were placed, and (7) evaluate the insurance needed to cover the cost of replacement animals in the three county area.

Method--A survey form for the collection of the needed data was devised. The forms were distributed to each agriculture teacher in Snyder, Union, and Northumberland Counties at an area vocational agriculture meeting. Each teacher was responsible for reporting the information for the Sears Roebuck Foundation animals in his school. Personal interviews were held with S. M. Curtis and W. R. Dutrow for help in developing the survey forms. Mr. Russell Weller, area supervisor, furnished the names of Sears animal recipients and insurance data filed in his office. Chi square, correlation, t-tests and correlated t-tests were used to analyze the data.

Findings--Information from the sixty-six Future Farmers of America members who had a total of sixty-six Sears Roebuck Foundation animals indicated that the Sears animals averaged significantly higher in milk production than their herdmates. Sears animals were above the standard rate of growth measured by heart girth and height at withers at all ages. Heart girth measurements of Sears animals at two, eighteen and twenty-four months and wither height at two months were significantly higher than standard. Heart girth measurements at six months correlated positively with milk production.

The Sears animals placed significantly lower than the other animals at the Rolling Green Youth Dairy Show. Sixty-five percent of the Sears animal recipients who are eligible for employment are employed in agriculture. Seventy percent of the Sears animals were placed on farms with full-time dairy farmers. Twelve of the sixty-eight boys used the insurance program to purchase a replacement animal.

BARR, ROBERT S. Identification and Classification of Skills Needed By Employees in Natural Resource Occupations. Paper, M.Ed., 1969, The Pennsylvania State University. 46 pp. Library, The Pennsylvania State University, University Park.

Purpose--The purpose of this study was to identify the mechanical skills needed by employees in agricultural resource occupations and to determine which of these skills can be taught to high school students.

Method--A list of competencies in agricultural resource occupations was completed by the investigator through a review of literature and consultation with persons employed. The items on the list were revised, condensed and changed to clarify terminology where this seemed desirable. The list was then checked by several agricultural mechanics specialists.

A three-point rating scale was then placed next to the skills for the reader to designate the degree of competency needed for both the entry level and the advancement level. The three parts of the rating scale were: (1) high level required, (2) medium level required, (3) no skill required.

The survey sample was selected from as many individuals in agricultural resource businesses and occupations as could be contacted in the north central part of Pennsylvania. All interviews were conducted by the investigator to maintain a uniform interviewing procedure. Each person was asked to rate each mechanical skill as it would apply to his line of work. He then indicated the level of skill required to enter, or advance or both according to his opinion.

The ratings were made by nursery workers, golf course workers, forest workers, SCS employees, fish and game workers, park and playground employees, engine mechanics, and agriculture teachers.

Findings--Forty-four persons in agricultural resource occupations were interviewed and asked to fill out the questionnaire. The survey forms were grouped according to job classification and the data were analyzed considering the general and specific skill areas in both entering and advancing in a job. It was found that there was a great deal of consistency in the data and the objectives of the study were achieved. A course of study was developed for a complete course in agricultural resources including the mechanical skills needed. As a result of this study it is now possible to justify and determine the shop equipment needed to operate a high school program in agricultural resources.

The highest skill ratings were for small gas engine instruction, carpentry, surveying, boat mechanics, and electrical competency. Lower ratings were given to sheet metal work, arc and gas welding, plumbing, concrete, rope work, and gun mechanics.

BECKET, JAMES W. The Role of the Supervising Teacher in Secondary Education. Thesis, Ph.D., 1968, Cornell University. 175 pp. Library, Cornell University, Ithaca, New York.

Purpose--The primary purpose of this study was to clarify the role of the supervising teacher in the student teaching program for the secondary school. The main objective was to determine the degree of consensus which exists concerning selected activities of the supervising teacher.

Method--The sociological tool of role analysis was used. Four groups of role definers--student teacher, teacher educators, school administrators, and supervising teachers--were asked to respond to a questionnaire composed of 104 suggested activities of the supervising teacher. Possible responses were Absolutely Must, Preferably Should, May or May Not, and Absolutely Must Not. Useable questionnaires were obtained from 318 respondents. Frequency distributions of the responses were tabulated and means and standard deviations were computed for each group of role definers, as well as for a composite. The degree of consensus was determined on each item by examination of these three measures, and each item was placed in one of six categories.

Findings--Although the amount of consensus was variable, it was possible to identify some trends in the response patterns which tend to clarify the role of the supervising teacher. First, he is an orienter, helping the student to become quickly oriented to the situation so he can concentrate on teaching. The supervising teacher then becomes a teacher of teachers, first by example, then through observation and critique. He is a facilitator, making it possible, with help from his colleagues and administration, for the student to observe and participate in a variety of teacher activities outside the classroom. He is part of a team, along with his colleagues, administration, and the teacher educators, but on his shoulders rests the burden of accomplishment for this phase of the future teacher's education.

BERKEY, ARTHUR L.; W. H. KELLY; and D. W. BROWN. The Relevance of Secondary Occupational Training in Agriculture to Occupational Patterns and Images. Staff Project with the New York State Education Department, Bureau of Occupational Education Research. 163 pp. Library, Cornell University, Ithaca.

Purpose--The objectives of the study were to gather occupational follow-up data from secondary agricultural graduates and their employers as a basis for evaluation of occupational education programs. The secondary objective was to develop a procedural follow-up model.

Method--Self administered questionnaires were used to gather data as to occupational status, relevance of training, agricultural images, and job satisfaction. Respondents were all 1968 New York State secondary agricultural graduates who had completed two years of some agricultural specialized area (farm production and management, conservation, agricultural mechanization, and ornamental horticulture), and their employers. Secondary school personnel assisted in providing lists of graduates and in follow-up. The questionnaire return averaged 61 per cent.

Findings--(1) Forty-one per cent of graduates were quickly employed, 30 per cent entered college and 1 per cent took other post-secondary training, 27 per cent entered military service and 1 per cent was unemployed. (2) Fifty-three per cent of all employed graduates worked in the area they were trained for. The range was 63 per cent for farm production and management graduates, and 30-40 per cent for graduates of the other areas. (3) Graduates found first year employment in a wide range of jobs, primarily through use of informal job seek methods. (4) Graduates received adequate training for the agricultural knowledges and abilities needed in their jobs. (5) The need for most agricultural knowledges and abilities in graduates' jobs was related to the per cent of graduates working in the specialized area for which training was received. Positive job attitudes and habits were needed in almost all jobs. (6) Almost all employed graduates were qualified for their job. (7) Most graduates have a positive image of farming and a higher positive image of off-farm related agricultural industry. (8) Graduates are generally satisfied with their jobs. Satisfaction was lowest for promotions available and pay received. (9) No significant relationship was found between graduates' image of agriculture and job satisfaction. (10) Further research is recommended to determine the reasons for student mobility between the specialized areas of agricultural training, and the differences between agricultural education offered by local school and Boards of Cooperative Educational Services. (11) Cooperation with advisory groups and task analysis of jobs is necessary to identify agricultural knowledges and abilities needed by graduates. (12) Increased curricular emphasis should be given to job seek skills, and positive job attitudes and habits. (13) The study should be continued to identify continuing occupational patterns and to refine the procedural model.

BLENIS, HENRY W. The Forest Technician in the Atlantic Provinces of Canada. Thesis, D.Ed., 1969, The Pennsylvania State University. 90 pp. Library, The Pennsylvania State University, University Park.

Purpose--The investigation covered forest technician positions in federal, provincial, and industrial forestry services in the Atlantic Provinces. The skill and training requirements for entry and advancement in those positions and the extent to which formally trained forest technicians were used by each employment category were examined. The relationship of the technician to the professional forester was expressed by establishing a technician/forester ratio for each employment category and for all categories combined. Number of forest technicians in relation to forested areas and industrial production were established. Future forest technician requirements were projected to 1975 by employment category.

Method--Informed opinion of professional foresters was sought as to appropriate training for the technicians who support them. Data were obtained mainly by use of mail questionnaires. Employment categories sampled were federal service, provincial service, and industrial service. The federal service included the Canada Department of Forestry and Rural Development in the Maritimes and Newfoundland Districts. Provincial services included the forestry departments of New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland. Industrial service included all pulp and paper companies in the Atlantic Region and all lumber companies whose annual production exceeded 20 million f.b.m.; an aggregate of 14 companies. The attitude survey on appropriate technician training was restricted to foresters who had practiced for at least three years and who had worked with and/or supervised the work of forest technicians.

Findings--Specific forest technician positions and their attendant duties and responsibilities were described for federal, provincial and industrial services. In the survey of technician use it was found that no forest technicians were trained by correspondence courses and only 5 of the 819 technicians identified by the study had received professional training. Federal and provincial use of trained forest technicians differed significantly from that of industry. Industry still relies mainly on "practical" men who are markedly older than formally trained technicians.

The technician/forester ratio was found to be 1.7:1 in federal service and 4.4:1 for both provincial and industrial service. Acreage of forest land per technician varied from 2,000 acres to over 700,000 acres. In the aggregate, the forest industries employ one forest technician for every 12,404 equivalent cords of annual wood requirement.

Reporting agencies indicated a projected need for 785 new forest technicians during the period 1967-1975. They also indicated that demand would not be spread evenly over the period but would probably be concentrated in the last four years.

Responses from foresters who have been working with forest technicians reveal no statistically significant differences in training requirements between employment categories. They suggest that the curriculum offered by the regional school may meet the needs of provincial and industrial technicians somewhat more fully than the needs of federal technicians.

BLEVINS, JAMES L. Vocational-Technical Education Programs Needed in Fulton County. Paper, M.Ed., 1969, The Pennsylvania State University. 84 pp. Library, The Pennsylvania State University, University Park.

Purpose--The purpose of the study was to identify the type and amount of vocational training needed by students in the three comprehensive high schools of Fulton County, Pennsylvania, and to design courses to be taught in local high school vocational agriculture departments which would provide much of the needed training.

Method--Census data and Bureau of Employment Security information were used to identify the trades which provided the greatest number of job opportunities in the area of Fulton County, Pennsylvania. Businesses which employed workers in the trades being considered were surveyed by mail to determine any recent changes in employment trends. High school students in grades nine through twelve were surveyed to determine the interest in vocational training on the part of students. The information was developed into percentages in tabular form for evaluation. A comparison was made between student interest in occupations and actual job opportunities.

Findings--The results of the study show that the number of job opportunities in skilled labor occupations was more plentiful than in any other category, that some of the subject-matter taught in vocational agriculture is closely related to the skill needs of employees in several trades, and that occupational training choices of high school students did not always compare favorably with the actual job opportunities available.

A definite need for vocational guidance on the part of high school students was indicated by the study. Many job opportunities existed in occupations where little student interest was shown. Findings indicate the need for employees in the many off-farm agricultural occupations.

BOYER, PETER A. The Development of a Workbook in Landscape Design. Paper, M.Ed., 1969, The Pennsylvania State University. 37 pp. Department of Agricultural Education, The Pennsylvania State University, University Park.

Purpose--To develop a high school student workbook in landscape design that would provide (1) landscape design situations suited to student exercises in planning, (2) a list of problems in each situation, (3) photographs of the houses showing several views of the lot, (4) a scale drawing of each planning situation, and (5) an acceptable solution to encourage teacher use of the workbook.

Method--Four plan views were selected. They represented town homes described as follows: a one-story house, a two-story house on a narrow lot, a newer two-story house, and a split-level house.

Family situations were described with intent that students would select a situation before making a landscape plan for property. The favorable and limiting characteristics of each property were real, as shown on the black-and-white photos and on color slides.

Findings--The landscape design solutions offered provided opportunity for instructor and students to identify principles of landscaping. Student plans could be self-evaluated as well as discussed by the class and appraised by the teacher.

Testing of the workbook in other schools and recording of errors commonly made was beyond the scope of this paper. Revision and expansion of the workbook, including anticipation of points requiring repeated trials, are recommended.

CHAMPION, JOHN S. Experience Gained in the Development of a Coordinated Program in Boys' Physical Education Grades One Through Twelve. Supervised Field Practicum, M.A., 1969, University of Rhode Island. 27pp. Department of Education, University of Rhode Island, Kingston.

Purpose--The purpose of this practicum was to gain personal growth and new learning experiences through the preparation of a boys' coordinated physical education program.

Method--Approval was secured from my supervisor to request the cooperation of the other members of the school's Physical Education Department in designing a coordinated program in boys' physical education, grades one through twelve. To accomplish the primary goal, the writer: (1) organized and conducted small group discussion meetings with department members; (2) assembled data, objectives and opinions of department members in regard to a coordinated program through small group discussions; (3) prepared and wrote a program for the South Kingstown School System based on data gathered in the small group meetings.

Findings--In developing this practicum, the writer became acutely aware of the wide differences in facilities, class size, number and length of weekly periods and the type of activities carried out in the elementary, junior high and senior high classes. These factors certainly have an influence on the varying degrees of effectiveness of the physical education program in the three settings.

The writer gained a great deal of insight into the methods of organizing and conducting small group discussion meetings, confidence in assembling data and in writing of a coordinated program. As a result of this practicum, the following recommendations are suggested: (1) group members should receive a precise explanation of the group goals and expectations; (2) any person planning to use leadership of small groups as a part of his project should become thoroughly familiar with the mechanics of group processes before the initial meeting; (3) potential planners should become thoroughly familiar with varied programs in operation.

CHERRY, KENNETH L. and ROBERT W. WALKER. The Development, Implementation and Evaluation of an Occupationally Oriented Curriculum in Grounds and Buildings Maintenance for High School Students and Adults in the Hollidaysburg Community, Blair County, Pennsylvania. Staff Study, 1967. 130 pp. Pennsylvania Department of Education, Harrisburg.

Purpose--To organize and evaluate an occupational education program specifically designed to educate and train boys for occupations in Grounds and Buildings Maintenance, as supervisors, technicians, and/or custodians. The occupations in Grounds and Buildings Maintenance are classified as related agricultural occupations because of the needed competencies in the grounds phase of the course.

Method--A proposal was submitted to the State Department of Public Instruction for funding under the Vocational Education Act of 1963. The facilities and equipment of the Vocational Agriculture Department at Hollidaysburg High School were available for sufficient time each day to conduct the classes. Special tools were purchased by the agriculture teachers as the course was developed and taught. Course outlines were prepared for 11th and 12th grade students, including provisions for a 6-week summer work experience at the end of the first year. Local institutions, industries, businesses and recreational agencies provided the work experience locations. Arrangements for counseling and enrolling students were made by the teachers of agriculture, the guidance department and the school administration.

Findings--The major units making up the course of study resulted from breaking down the role of the supervisor of grounds and buildings maintenance into three major divisions, namely, supervisory skills, grounds maintenance and building maintenance. Several other areas were identified as follows: building construction and renovation, basic mechanical skills, individual projects, and vocational and educational planning. The major units were further divided into problem areas which in turn were broken down into lessons. Upon completion of the Pilot Study in Grounds and Buildings Maintenance, June, 1967, each student was counseled as to his plans for the future. Of the fifteen boys completing the course, three have been accepted in college, two are attending a trade school, three entered the armed service, and seven have been placed in permanent employment related to grounds and building maintenance.

The project directors and associates are convinced that the curriculum developed as a result of this pilot study was adequately designed to prepare student participants for basic competencies required by the several levels of occupations in grounds and buildings maintenance.

CRUNKILTON, JOHN and JOE P. BAIL. Area Occupational Education Programs in a Selected Twelve County Area in New York: Concerns and Expectations. Staff Study in Cooperation with New York State Department of Education. 209 pp. Library, Cornell University, Ithaca, New York.

Purpose--The major purpose of this study was to develop guidelines for further improvement of area occupational programs, based upon the responses of lay and professional groups to a series of statements regarding their concerns and expectations of such programs. Eight area centers under Boards of Cooperative Educational Services (BOCES) in 12 upstate New York counties comprised the study area.

Method--A thorough review of research and literature was conducted to collect the possible concerns and expectations lay and professional groups might hold. Area occupational directors in these eight centers critically reviewed these concerns and expectations for appropriateness and clarity. These statements were then incorporated into questionnaires which were field tested in two area centers outside the study area. A self-administered technique was used to collect data from occupational students and their parents, occupational teachers, administrators and guidance counselors, school board members, and potential employers.

Data were coded for key punching and then analyzed on the 360 Wang Computer. Findings were reported in two sections. First, attention was focused upon those statements identified as major concerns by each respondent group. Further analysis was performed on the top 25 percent of concerns identified by each group. Chi square was employed to determine if significant differences occurred between respondent groups on identified concerns. The second section referred to data collected on expectations of area occupational programs. A mean for degree of expectation fulfillment was computed for each statement with "1" equal to expectation completely fulfilled, "2" partially fulfilled, and "3" not fulfilled. Statements were then ranked according to expectation fulfillment and the top 25 percent and bottom 25 percent were analyzed further. The chi square statistical procedure was used to determine if any significant differences existed between groups on their expectations. The one way analysis of variance was used to determine if any significant differences occurred on expectation fulfillment. A complete summary of all data is presented in the appendices.

Findings--Students and parents held similar concerns regarding opportunities for job placement upon completion of the occupational program. Concern with the employability of graduates in entry level positions was expressed by students, parents, and employers. Teachers were mainly concerned with the present guidance services available to students. Cost of operating area programs was a major concern of board members. Administrators and guidance counselors indicated concern as to why students drop out of the programs. High expectations were expressed that regular lines of communication between area and local schools be established, graduates be prepared for entry level positions, guidance activities of area and local schools be coordinated, and modern, adequate facilities be available. Means on student expectation fulfillments ranged from 1.36-2.00, and parents indicated a higher level of fulfillment, with means ranging from 1.08-1.57. Expectation fulfillment for the other respondent groups were lower and similar. Respondent groups and means of fulfillment were: teachers, 1.35-2.53; administrators and guidance counselors, 1.31-2.29;

and board members, 1.40-2.19.

Conclusions drawn from this study were: evaluation techniques specifically applicable to area occupational programs must be developed; the role of the area and component school guidance counselors for area occupational programs needs clarification; clear lines of communication must be established between area and component schools; in-service programs for occupational teachers are needed; that a positive attitude existed toward continuation and expansion of the occupational programs by professional and lay groups; procedures for student selection must be reviewed, with occupational teachers assuming an active role in the selection process; more programs are needed for out-of-school youth and adults, and for students with special needs; supplemental work experience programs are desirable; and placement and follow-up of occupational graduates should be performed.

A series of 27 guidelines were prepared under the categories of administration, guidance, curriculum, or general aspects of program development.

12:

CULLEN, ERNEST T. JR. Comparative Value of Selected FFA Activities. Thesis, M.S., 1969, University of Maryland. 124 pp. Library, University of Maryland, College Park.

Purpose--To determine the value of selected FFA activities designed to promote the development of leadership qualities, desirable work habits and attitudes in members of the Future Farmers of America.

Method--A national jury and two Wicomico County, Maryland, populations, and encompassing all agri-businessmen and the second a random sampling of the general population, were used to evaluate the activities.

A questionnaire was constructed asking respondents to rate the value of the fifty randomly placed FFA activities on a five point scale. The FFA activities were placed and tallied in predetermined categories of behavioral objectives. The z-test was used to determine the significant difference between the opinions of the national jury and the two Maryland population groups.

The opinions of the national jury and two population groups indicated that the selected activities were of value in promoting the development of leadership qualities, desirable work habits and attitudes in FFA members.

Findings--It was found that the national jury and agri-businessmen gave the highest rating to the activities classified under the behavioral objective "to develop personal and organizational leadership ability." The general population gave the highest rating to the activities classified under the behavioral objective "to develop concern for general welfare of others." The agri-businessmen and general population rated the activities classified under the behavioral objective "to develop business and related occupational skills" much higher than did the national jury.

DAWSON, JAMES I. Effects of Sequence Redundance, and Programming on Agri-Business Concept Learning. Thesis, Ph.D., 1969, The Pennsylvania State University. 103 pp Library, The Pennsylvania State University, University Park.

Purpose--To determine effects of sequence, redundancy, and programming on off-farm agri-business management concept learning. Emphasis was placed on education for senior high school students for off-farm occupations in agricultural supplies and agricultural products, processing and marketing.

Method--Twelve agriculture teachers and 182 senior high school students in twelve schools located in eight Pennsylvania counties participated in the teaching experiment. Sequence, redundancy, and programming were the treatment variables. Data were obtained on selected characteristics of the students, including place of residence, socio-economic level of parents, and high school fifth.

The criterion measures were: (1) a programmed learning test, (2) a concept learning test, and (3) an expression of career choice. The measurement of subject matter knowledge by the branch-programmed learning test and the Van Valkenburgh response card was made only as a post-test. Five hypotheses were tested at the .05 level.

Findings--(1) There was no significant difference by analysis of covariance in mean scores on either test among students in the two instructional sequences in which the programmed learning unit was followed, or preceded, by six class instruction units. (2) Students who studied the high redundant programmed learning unit had a mean test score significantly higher than the students who studied the low redundant programmed learning unit. (3) Students who answered the branch-programmed learning test questions with referral to the unit had a significantly higher mean test score than the students who answered the test questions without referral to the unit.

(4a) Place of residence, whether farm, rural non-farm, or urban, had no significant effect on student mean scores on either test. (4b) Socio-economic level of parents, determined by dollars of family income, had no significant relationshup to student scores on the two tests. (4c) Students ranked in the first fifth of the high school class had the highest mean scores on the branch-programmed learning test and on the concept learning pre-test and post-test. Each correlation was positive and significant.

(5) No significant difference was found by a test for correlated proportions between the 90 out of 182 students who selected an agri-business career before studying the unit and the 101 who selected an agri-business career after studying the unit. The students who selected an agri-business career had a significantly higher mean concept learning test score than the students who did not indicate a preference for an agri-business career.

Course material for high school students should contain relevant high redundancy; branch-programmed instruction with immediate feedback should be used for high school students; and emphasis should be placed on developing optimal redundant models for branch-programmed course material in off-farm agri-business management which will contribute to increased learning by senior high school students.

DELAUDER, ROBERT S. JR. Factors Associated with Membership and Non-membership in FFA of Maryland Vocational Agriculture Students. Thesis, M.S., 1969, University of Maryland. 137 pp. Library, University of Maryland, College Park.

Purpose--To determine factors that influence membership and non-membership in FFA.

Method--There were 303 vocational agriculture students and 53 Maryland FFA advisors involved in this study.

The chi square test of statistical significance was used to determine the significance of differences between the responses of FFA members and non-members and between the responses of FFA advisors of high percentage membership chapters and FFA advisors of low percentage membership chapters.

Findings--(1) Most of the non-members were first year vocational agriculture students. (2) A significantly higher proportion of FFA members lived on farms, worked in rural areas, and had agricultural work experience than did non-members. (3) A significantly higher proportion of FFA members plan to farm than non-members. (4) FFA members belonged to slightly more organizations than did non-members. (5) FFA members had had more relatives who had been members of the FFA than had non-members. (6) Friends had the greatest influence on FFA members with regard to joining the FFA. Friends were closely followed as persons influencing membership in FFA by FFA advisors, FFA members, and relatives. (7) No one appeared to have had an influence on non-members' decisions not to join FFA. (8) A majority of the vocational agriculture students did not feel that a change in the name of the FFA was necessary. (9) Number of hours worked per week was not a factor affecting membership in FFA. (10) Larger vocational agriculture departments tended to have a lower FFA membership percentage. (11) Many FFA members and non-members felt that the FFA has little to offer non-farm youth.

EVAUL, EDWARD E. Plant Materials for Ornamental Horticulture in Secondary Schools. Master's Project, M.Ed., 1969. 97 pp. Graduate School of Education, Rutgers University - The State University of New Jersey, New Brunswick.

Purpose--The primary purpose of the project was to organize a list of plant materials with priority for teaching ornamental horticulture in secondary schools. Secondary purposes were to determine the rank of plant materials (1) that teachers felt essential and useful for teaching ornamental horticulture in secondary schools, and (2) that businessmen felt essential and useful for teaching ornamental horticulture in secondary schools

Method--Both teachers and businessmen were sampled to establish an approved list of plant materials useful to ornamental horticulture teachers. The teachers in the sample were recommended by their state supervisors. New Jersey, Pennsylvania, and Maryland were the states represented in the sample. Businessmen were recommended through various sources. The membership lists in professional association directories and specialists in ornamental horticulture were utilized for the selection of the sample.

Each teacher in the sample was mailed a cover letter explaining the study and a checklist with three parts: turf, greenhouse, and nursery-landscape. The teachers were asked to complete the checklists and return them.

Each businessman was mailed a checklist relevant to his area, i.e., turf, greenhouse, or nursery-landscape.

Data were collected and analyzed. Ten of the twelve teachers responded to the checklists. A total of eighty-seven businessmen responded. Of the businessmen responding, ten in each specialized areas of ornamental horticulture were randomly selected to provide data for the study.

Teacher's and businessmen's ratings of plants relative to usefulness for teaching ornamental horticulture were recorded separately and combined in tables.

Findings--In most instances the ratings given by businessmen were similar to those given by teachers. An overall rating of the usefulness of plant materials for teaching ornamental horticulture was obtained by combining ratings of teachers and businessmen. Those plants by categories receiving the highest ratings were: (1) Lawn Grasses--Merion Kentucky bluegrass, Pennlawn red fescue, and creeping bentgrass. (2) Weeds--knotweed, chickweed, crabgrass, goosegrass, and wild garlic. (3) Cut and Pot Flowers--chrysanthemums. (4) Forcing Bulbs--hyacinth and tulip. (5) Vegetables--tomato, cabbage, pepper, and lettuce plants. (6) Cuttings--yew, azalea, holly, forsytha, and myrtle. (7) Bedding Plants--petunia, marigold, zinnia, pansy, begonia, salvia, snapdragon, ageratum, and impatiens. (8) Foliage Plants--philodendron, coleus, African violet, and begonia. (9) Trees--flowering dogwood, maple, white pine, pine oak, and red oak. (10) Shrubs--Japanese holly, and Japanese andromeda. (11) Ground Covers--myrtle and pachysandra.

GLOTFELTY, DAVID F. The Selection of Science Principles to Be Taught Inductively in a Ninth Grade Agricultural Science Course. Paper, M.Ed., 1969, The Pennsylvania State University. 45 pp. Library, The Pennsylvania State University, University Park.

Purpose--(1) To design a course of study for ninth grade Agricultural Science classes which would use problems in agriculture to teach biological and physical science principles. (2) To select principles which should be taught in ninth grade, and (3) To identify which of the principles selected could best be taught using inductive problem solving.

Method--The course of study was developed by a review of texts for both general science and introductory agriculture. The Agricultural Science course was taught in one school for two years and the course of study revised on the basis of that experience.

The list of principles developed was prepared by submitting lists from previous studies to four evaluators who selected those suitable for Agricultural Science. After the list of principles was developed the evaluators indicated which teaching method, inductive, deductive, or a combination of the two, they felt should be used to teach each principle.

Findings--One hundred twenty-nine of the two hundred fourteen principles submitted to the evaluators were selected for use in Agricultural Science. Fifty-two of the principles selected were judged by the evaluators as being best taught using the inductive method or a combination of inductive and deductive methods. The following observations were made after developing the list of principles for agricultural science, while developing a course of study, or while teaching the introductory course in a modified cross-sectional curriculum.

Teaching agriculture as a related science course gives more detailed coverage of the subject matter. The flexibility required to solve problems suggested by the students and to teach seasonal material was not sacrificed when the subject matter was arranged into courses. Combining ninth grade science and agriculture resulted in a larger class and made it possible to provide general education in agriculture without adding to the instructor's load or adding another class to the school schedule.

Students enrolled in advanced courses in agriculture after completing Agricultural Science who would not have done so otherwise. Teaching science principles by applying them to problems in agriculture was found to be an efficient way to teach both subjects. The students enrolled in agricultural science differed greatly in their ability to discover and apply principles.

Teaching science principles inductively so that the students discover all or part of the principles themselves created interest. More preparation time was needed by the instructor to design learning situations when principles were taught inductively. Not all principles can be taught inductively.

HASH, JOHN ALEX. The Construction of a Standardized Achievement Test in Forestry. Thesis, Ed.D., 1969, Cornell University. 179 pp. Library, Cornell University, Ithaca, New York.

Purpose--The fundamental problem of this study was the construction of a multiple-choice, standardized achievement test in forestry education for the secondary school.

Method--A panel of four subject matter specialists was utilized in identifying eight major content areas in forestry, preparing a subject outline, and determining the total percentage of test items that should come from each major content area. Another panel of three educational specifications by determining the percentage of test items within each content area that should measure: (1) vocabulary and factual recall, (2) understanding and generalizations, and (3) application and problem solving. Using the table of specifications as a guide, 200 multiple-choice test items were constructed by the investigator and reviewed by the subject matter specialists for clarity and accuracy.

After a preliminary tryout for perfecting directions, establishing procedures, and estimating difficulty level, the 200 items were assembled in order of difficulty from easy to hard and administered to 500 students in grades 9 through 12 during two 55-minute periods on consecutive days. Twenty-nine South Carolina high schools (10 percent of those offering vocational agriculture) and twenty counties (44 percent) from the Piedmont to the Coastal Plain were sampled in the study. The schools selected met ten criteria established in advance; namely, the teachers were interested in forestry, had good forestry programs, and taught the subject systematically. Predominantly Caucasian and Negroid schools were selected in the same proportion as they exist in the State.

One hundred items for the final test form were selected on the basis of item analyses, cross-validation, and content validity evidence. Tentative norms for grades 9, 10, 11, and 12 were prepared in the form of percentile ranks and T-scores.

Findings--The 100 test items selected for the final form were distributed throughout the table of specifications very closely to the recommendations of the two panels of experts. It is on this evidence along with the judgment of the investigator that content validity for this test is based.

The reliability coefficient of the final form calculated by Kuder-Richardson formula 20 on the cross-validation sample was .88; the standard error of measurement was 4.47.

Point biserial correlations (discrimination indices) of all items selected for the final form, except two, were significant beyond the .05 level by t-test. Content validity considerations dictated that the latter two items be retained for the final form.

The standard errors of the mean calculated for the norm groups ranged from .94 for the eleventh grade (n=166) to 1.54 for both the twelfth grade (n=106) and ninth grade (n=94) with 1.31 for the tenth grade (n=92). The present percentile rank and T-score norms must be considered as tentative because of the relatively small number of cases tested within each grade in high school vocational agriculture. Moreover, these norms are relevant only for South Carolina at the present stage of test standardization.

HITCHCOCK, DOUGLAS J. The Relationship of FFA Leadership Status to Social Participation. Paper, M.Ed., 1969, The Pennsylvania State University. 44 pp. Library, The Pennsylvania State University, University Park.

Purpose--To determine the relationship of the leadership status of Future Farmers of America members in high school to the amount of social participation after graduation.

Method--Data were collected from agriculture seniors who were graduated from 10 south central Pennsylvania high schools in the years 1964, 1966, and 1968. During a visit to each school, leadership status forms were completed for each graduate from the data in their cumulative folders and information supplied by the agriculture teachers. From the information on the leadership status form, each graduate was classified as a leader or non-leader by the author. To be classified as a leader, a graduate had to meet one of the following minimum qualifications: (1) held a major office in the FFA, (2) held a minor office and served as chairman of a committee. Graduates who were members but did not meet either qualification for a leader were classified as non-leaders. For each of 101 graduates a social participation score was calculated by using a social participation rating scale. Analysis of variance and Duncan's multiple range test were applied at the .05 level to determine the relationship between leadership status and social participation.

Findings--Fifty-four graduates classified as leaders had a mean social participation score of 9.9, significantly higher than the mean score of 4.2 for 47 non-leaders. Social participation mean scores of the 101 graduates were not significantly different among three groups by years out of school. Place of residence had no significant effect on the social participation mean scores of leaders and non-leaders.

Differences in social participation mean scores of graduates among occupational groups were significant. Those who worked in off-farm agricultural occupations had the highest mean score. Graduates in non-farming occupations had the lowest score. Marital status had no significant relationship to social participation scores of leaders and non-leaders. Seven graduates with a parent who had post-high school education had higher social participation scores.

JACKSON, WILLIE F. Relationship of Socio-Economic Level of Negro High School Students to Occupational Choice, Educational Aspirations and Attitudes. Thesis, D.Ed., 1969, The Pennsylvania State University. 122 pp. Library, The Pennsylvania State University, University Park.

Purpose--(1) To determine relationships of the socio-economic level of high school students to occupational choice, educational aspirations and certain attitudes, (2) to compare the socio-economic levels of high school students in vocational agriculture with students in the academic and general curricula, (3) to determine the relationship of the socio-economic level of home environment to geographic area, (4) to identify and compare certain factors associated with socio-economic level of home environment, (5) to examine certain family variables to determine their relationship to socio-economic level of home environment, and (6) to provide basic information for developing programs in agricultural education.

Method--Data were collected through personal interviews with 648 high school male students in 24 predominantly Negro schools in Mississippi. Seventy-five schools were stratified into three geographic areas. Eight schools were randomly selected from each geographic area. Twenty-seven high school students were randomly selected from each of the 24 high schools. They were selected from grades 9, 10, and 11 and from the vocational, general and academic curricula, three students from each grade in each curriculum.

Findings--More students of the upper socio-economic level of home environment chose occupations in professional and managerial categories than students in the medium socio-economic level. The students of the lower socio-economic level chose occupations in the machine trades and miscellaneous categories. The educational aspirations of students from the upper socio-economic level were higher than the students of the medium and lower socio-economic levels.

Students from the upper socio-economic level expressed more favorable attitudes toward patriotism, honesty, and education than students in the medium and lower socio-economic levels. The students of the medium socio-economic level expressed more favorable attitudes toward religion and least favorable attitudes toward honesty.

A greater percentage of students of the upper socio-economic level were in the academic curriculum as compared with a greater percentage of students from the medium socio-economic level in the vocational curriculums and greater percentage of the students from the lower socio-economic level in the general curriculum. More students from the lower socio-economic level lived in the Delta area of Mississippi.

The students in the academic curriculum had higher post-high school educational aspirations than the students in the vocational and general curricula. Fewer students in the vocational curriculum aspired to less than a high school education than students in the academic or general curriculum.

The families of the students in the upper socio-economic level of home environment were better educated, held more jobs in the professional, managerial and technical categories, earned more money, participated in more activities, belonged to more organizations and had more living space per person than families of the medium or lower socio-economic levels.

20.

KAIMAN, EVELYN H. Gaining Experience in Working With Low-Income Suburban Homemakers Through the Development of an Educational Program in Foods and Nutrition for the Tri-Town Economic Opportunity Center. Supervised Field Practicum, M.A., 1969, University of Rhode Island. 40 pp. Department of Education, University of Rhode Island, Kingston.

Purpose--This practicum was planned to provide the writer with an opportunity for gaining experience in: (1) encouraging low-income suburban homemakers to take advantage of available services at their Office of Economic Opportunity Center, (2) securing the confidence of low-income homemakers, (3) setting up a program in Foods and Nutrition to meet their needs, and (4) using some evaluation techniques.

Method--The following procedures were used: (1) Permission was obtained to work within the framework of an Office of Economic Opportunity center. (2) Data were gathered concerning potential clients and methods already being used in the project area. (3) A series of weekly foods classes was planned and presented for the low-income homemakers, based on the use of low-cost and surplus foods. (4) Homemakers in the class were encouraged to discuss their family food problems which then became topics for succeeding classes. (5) Reports of similar projects in other states were studied in an effort to locate different methods of reaching low-income homemakers. (6) The use of small neighborhood centers rather than one regional center was suggested as a better way to reach more people. (7) The series of classes ended with the sixteenth session. An evaluation sheet was used to determine reactions of the homemakers involved. (8) After a four-month lapse, the practicum was reactivated. Plans were made for opening four neighborhood centers. (9) Information about Food Stamps was the initial topic in each center, with subsequent programs chosen by the participants in each area.

Findings--The objectives stated in the proposal for this practicum were achieved, although not precisely as planned. The writer did have an opportunity to work with low-income suburban homemakers which was the chief reason for the existence of the project. In addition, the following were accomplished: (1) Several methods were used to encourage participation in programs at the Economic Opportunity Center. However, greater numbers participated when the program was moved out to neighborhood centers. (2) The writer found it unexpectedly easy to gain the confidence of the low-income homemakers with whom she worked. (3) A Foods and Nutrition program was developed which included the suggestions made by class members as well as basic information about feeding a family needed by all homemakers. (4) Although only two written evaluations were used, they provided an opportunity for the writer to learn the effectiveness of evaluating by these homemakers when an ability to read and write is required.

The writer suggests these recommendations as a result of this practicum: (1) A continued effort should be made to reach low-income suburban homemakers. If one method doesn't work, another should be tried. (2) Those who deal directly with low-income families should have great patience and a willingness to work on a one-to-one basis for as long as is necessary. (3) Whenever they are able, low-income homemakers should be encouraged to assist in planning and to take an active part in their own programs. (4) The writer should continue to give priority to low-income families until they can develop to the point of responding to traditional methods.

KELLER, ROBERT ALAN. Vocational Agriculture in Correctional Institutions For Boys. Thesis, M.S., 1969, West Virginia University. 81 pp. Library, West Virginia University, Morgantown.

Purpose--The purpose of this study was to determine the background and characteristics of institutionalized boys and to determine the present status of educational programs at correctional institutions, in order to develop guidelines for vocational agriculture.

Method--Data for this study were collected by questionnaires from fifty-one correctional institutions for boys and nineteen forestry camps. Additional data were collected at West Virginia Industrial School for Boys. Results were expressed in tables and through prose description.

Findings--The findings revealed institutionalized boys to be a special-needs group generally with below average intelligence, low achievement, and academic retardation. Most boys come from broken or disrupted homes or from undesirable home situations and were committed for both deliquent and criminal acts. One-fourth of the boys were recommitments as parole violators.

All reporting correctional institutions for boys had academic educational programs, and 90 percent had vocational education. However, at forestry camps, less emphasis was placed on educational programs. In all cases, state teacher certification was required and a favorable student-teacher ratio existed.

Vocational agriculture courses were offered at 37 percent of the institutions having vocational education, and all these were located at institutions having agricultural production operations. Over one-half of the institutions reporting had agricultural operations. Several institutions had greenhouses, but did not indicate using them for instructional purposes.

The vocational agriculture courses offered were organized in two ways: (1) as a single class emphasizing various areas of agriculture, and (2) as specialized classes in various areas of agriculture. The most frequently emphasized areas were production agriculture, ornamental horticulture, and meat cutting.

Suggested content of courses of instruction for specialized classes in agriculture for the West Virginia Industrial School for Boys are included as a supplement in the study. The courses of instruction formulated, include agricultural sales and services, agricultural products and processing, and ornamental horticulture.

KELLY, WILLIAM H. The Development and Evaluation of an Educational Game to Teach Specific Aspects of Farm Management Decision Making to High School Vocational Agriculture Students. Thesis, Ph.D., 1969, Cornell University. 133 pp. Library, Cornell University, Ithaca, New York.

Purpose--This study consisted of developing a farm management game and then experimentally evaluating what students learned as a result of playing it. It was hypothesized that: (1) if students are taught specific information by participation in an educational game, then they will show significantly higher achievement on a specific post test than students who have not played the game; (2) if students of lower scholastic performance participate in an educational game their achievement scores will be significantly higher than students with comparable averages in the control group; (3) if students play the game in groups of two or three students, then their mean achievement will be significantly higher than students who play the game individually.

Method--Thirty-six New York State schools offering a course in farm production and management three and four constituted the sample and were randomly assigned to six different groups. There were three treatment levels; control, game played individually, and game played in groups of two or three. Each treatment consisted of two groups, one receiving a pre-test and post test and the other group just receiving the post test. The control groups only took the appropriate test(s) and did not play the game at all. All schools knew they were participating in an experiment and all conducted it at the same time.

All students and teachers in schools that actually played the game were also asked to complete a short questionnaire to assess their subjective evaluation of the game.

The teachers were also asked to furnish final grades from the last school year in English, social studies and agriculture for each student participating in the study. This allowed the researcher to divide the students into low and high performers using 75 as the cutting point.

The post test was the dependent variable and this was subdivided by specific questions to obtain sub-test scores for computational and decision making. This resulted in three scores for each student and, with the low and high performance grouping within schools, six scores for each school. These school scores then became the experimental units used in the final analysis.

The data were analyzed using a multiple classification analysis of variance. No significant differences resulted that were sufficient to support the original hypotheses.

Findings--Based upon the empirical evidence, as well as the subjective or intuitive evaluation by the subjects, the following conclusions were drawn. The conclusions should be interpreted within the framework of this particular study only.

Conclusion 1: The researcher failed to find any evidence that improvement in specific farm management abilities, such as computing labor income and decision-making, resulted from playing an educational game.

Conclusion 2: Students with school records of low scholastic performance do not demonstrate improved performance as the result of participating in an educational game.

Conclusion 3: Making decisions and solving problems cooperatively, in groups of two or three, while participating in an educational game does not result in more effective learning.

Conclusion 4: Most students react favorably to educational games in that they find them challenging and fun.

Conclusion 5: Teachers of agriculture find educational games a satisfactory way of teaching and they believe games can enhance instruction in several areas of farm management.

Conclusion 6: Educational games can be used to generate high student interest.

KISSELL, ARNOLD K. The Use of Aircraft in Agriculture and Associated Occupations in Pennsylvania with Predictions for the Future of Agricultural Aviation in Pennsylvania and the United States. Thesis, M.S., 1969, The Pennsylvania State University. 50 pp. Library, The Pennsylvania State University, University Park.

Purpose--To investigate the past, present and future of agricultural aviation in Pennsylvania, to determine the uses of aircraft for agricultural purposes, the occupations directly related to agricultural aviation in Pennsylvania, and project future growth and development of agricultural aviation.

Method--Three different groups of people were involved as participants. The first group included all known active aerial applicators in Pennsylvania doing agricultural work. The second group included agricultural aircraft specialists employed by manufacturers of agricultural aircraft in the United States. The third group included a sample of the active membership of the Flying Farmer Association in Pennsylvania. Separate interview schedules were developed for use with the three groups, but with the same questions being asked each group in the section concerning predictions for future of agricultural aviation. The aerial applicators were surveyed by use of a schedule and a personal interview. The aircraft manufacturers were surveyed by use of a mailed schedule resulting in a more than 80 percent return. The Flying Farmer group was surveyed by the investigator with the use of a schedule. Twenty-seven schedules were summarized and analyzed. Predictions by the three groups were compared by analysis of variance at the .05 level.

Findings--No significant differences were found among the three groups in their predictions for the future of agricultural aviation. Based on a five point rating scale ranging from "great increase" (5) to "great decrease" (1) means were calculated for each group: aerial applicators 3.74, aircraft manufactures 4.19, and the Flying Farmers 4.13.

The number of uses for aircraft for agricultural purposes has increased during the past five years. Acreages and amounts of aerial application have remained constant or increased but are influenced by seasonal factors. Important uses of aircraft in Pennsylvania are for (1) spraying of alfalfa, (2) spraying of timber and (3) aerial observation of timber land.

The size and type of operation and the number of employees varied greatly among agricultural aerial application companies located in Pennsylvania. The job titles and duties of the employees in agricultural aviation jobs also were quite varied. The total number employed (not all working in Pennsylvania) during the 1969 season by Pennsylvania was 107, with a range from one to 42 persons per company. There is a need for well qualified persons for many of the jobs in agricultural aviation.

LARRABEE, DAVID E. Development of Semantic Differential Scales for Measurement of Concepts in Agriculture. Thesis, D.Ed., 1969, The Pennsylvania State University. 68 pp. Library, The Pennsylvania State University, University Park.

Purpose--The main purpose of this study was to identify and label dimensions of connotative meaning in agriculture. A second purpose was to develop a semantic differential for measuring the dimension(s).

Method--In determining the dimensions of connotative meaning concepts, scales and subjects were selected which were germane to agriculture. Factor analysis was employed to determine the factors or dimensions.

The typical semantic differential study involves having subjects rate a number of verbal concepts on a series of bipolar adjective scales. In this study six concepts were rated on 32 adjective scales by 103 Pennsylvania agriculture teachers and 90 Pennsylvania State University students in agriculture. A validation group of 66 agriculture teachers rated six alternate concepts on the 32 scales. The concepts and adjective scales used were selected according to their differentiating power on a preliminary semantic differential of 20 concepts and 60 adjective scales rated by individuals engaged in professional agricultural activities: professors, college students, businessmen, farmers, high school teachers and high school students.

The scale model for both individual and composite groups of concepts rated by the three subject groups revealed four distinct dimensions. The dimensions included Osgood's original three, evaluative, potency and activity, and a new dimension which was labeled wholesomeness. This dimension contained the following bipolar adjective scales: (1) beautiful-ugly, (2) sweet-sour, (3) clean-dirty, (4) pleasant-unpleasant, (5) healthy-unhealthy, (6) fresh-stale, and (7) living-dead.

Findings--Agriculture teachers and students were able to differentiate among the concepts in agriculture according to the wholesomeness dimension. They could also differentiate among the four dimensions for a given concept. Agriculture teachers and agriculture students share the same connotative meaning dimensions for concepts in agriculture.

It was concluded that words used to express feeling in agriculture are either evaluative, wholesome, potent, or active. It was suggested that the wholesomeness dimension measures esthetic values or attitudes and the evaluative dimension measures the economic or materialistic values.

Recommendations were made for further study of the Agricultural Semantic Differential to: (1) improve its construct validity, (2) compare the wholesomeness and evaluative dimensions, and (3) investigate potential use of the Agricultural Semantic Differential as a means of predicting academic success, counseling students, evaluating programs and determining attitude changing criteria.

LAVIN, JAMES M. Post-High School Plans and Characteristics of Twelfth Grade Boys Enrolled in Agriculture or Other Courses of Study. Thesis, D.Ed., 1969, The Pennsylvania State University. 117 pp. Library, The Pennsylvania State University, University Park.

Purpose--(1) To identify the immediate post-high school plans, career aspirations, and selected characteristics of twelfth grade boys enrolled in agriculture or other courses; and (2) to compare the immediate post-high school plans and career aspirations with selected characteristics of the students enrolled in agriculture and students in other programs.

Method--The study included 30 randomly selected public secondary schools in southern Pennsylvania having vocational agriculture as part of the curriculum. There were 15 agriculture cooperating teacher training schools and 15 other randomly selected schools. The sample included 575 male members of the senior class randomly selected from the academic, general, commercial, industrial arts, and agriculture programs. Also surveyed were the 285 twelfth grade boys enrolled in agriculture in the thirty schools. Data were obtained by means of group interviews and completion of a questionnaire. High school rank and SAT scores were furnished by the guidance counselor. To determine relationships among variables, chi square tests were used.

Findings--No significant differences in immediate post-high school plans were found between the students in the agriculture cooperating teacher training schools and the other randomly selected schools. A higher percentage of boys in the academic course plan additional schooling compared to those in the other courses. A college or university is the main type of educational institution desired by the random students planning further schooling. The agriculture students favor technical institutes, trade schools or other specialized schools. Most students expect to attend schools within the state.

Twenty-one percent of the random sample from all programs anticipate immediate full- or part-time employment; 60 percent, further schooling; 11 percent, military service; and 6 percent are undecided. Fifty-five percent of the agriculture students plan immediate full- or part-time employment; 23 percent, additional schooling; 13 percent, military service; and 9 percent are undecided. A majority of students planning full- or part-time employment expect to be employed within their local area.

More parents of students from the random sample completed high school. Fifty-two percent of the mothers of the random students are employed full- or part-time. Twenty-eight percent of the fathers of the agriculture students hold both a full- and part-time job. The students for the most part have discussed their post-high school plans with their parents. At least 80 percent of the parents expressed favorable feelings toward their sons' plans. Sixty-five percent of the random students discussed their plans with the school guidance counselor. Less than half of the agriculture students had done so. More agriculture seniors reported inadequate or uncertain knowledge regarding opportunities for further schooling, costs involved, or the availability of financial aid opportunities.

LEATHERMAN, ESTON THOMAS. Occupational Status of Former Circleville Vocational Agriculture Students. Thesis, M.S., 1969, West Virginia University. 93 pp. Library, West Virginia University, Morgantown.

Purpose--The purpose of this study was to determine the occupational status of former students of vocational agriculture of Circleville High School who had completed one or more years of vocational agriculture.

Method--Names of the former students were obtained from the school's permanent record cards. Questionnaires were sent to 282 former students whose addresses could be ascertained. Nearly 54 percent of the questionnaires were completed and returned. The data obtained were presented in tabular form and prose description.

Findings--The findings revealed that 25.7 percent of the former students were farming part-time; 11.8 percent were full-time farmers; 6.6 percent were engaged in an agriculturally related occupation; 44.7 percent were employed in non-agricultural occupations; 7.2 percent were in college, trade or vocational schools; 3.3 percent were in military service; and 0.7 percent were unemployed.

The writer concluded that vocational agriculture at Circleville High School is fulfilling a need. The former students who are farming are managing larger operations than the average Pendleton County and West Virginia farmer. Respondents who completed four years of vo-ag were more likely to be farming than those who completed only one year.

This study indicates that in the future, young and adult farmer classes and agriculturally related occupations should be stressed in the vo-ag program at Circleville High School.

The FFA organization according to statements of those responding was attested to be a worthwhile activity for most former students. The average number of years of membership was 3.6.

MAZER, HOMER F. Effectiveness of Cooperative Extension Service Newsletters with Different Formats Received by Dairymen in Pennsylvania. Thesis, D.Ed., 1969, The Pennsylvania State University. 97 pp. Library, The Pennsylvania State University, University Park.

Purpose--To measure differences in knowledge among dairymen after they received Extension newsletters designed with different formats. The subject matter was the harvesting, storing, and feeding of high-moisture corn.

Method--A series of three Cooperative Extension Service newsletters relating to high-moisture corn was developed using different formats. In seven counties in Pennsylvania dairymen participating one night per week in a five week clinic pertaining to herd health and management were selected at random as the study participants. The dairymen in all counties took a pre-test and a post-test administered by the county agent to measure knowledge of harvesting and equipment, storing and handling, and feeding high-moisture corn. In two counties selected at random the farmers did not receive newsletters. Four groups of dairymen selected randomly in five counties received newsletters in one of the following formats: (1) Pictorial - one letter weekly for three weeks, (2) Outline - one letter weekly for three weeks, (3) Conventional paragraph - one letter weekly for three weeks, and (4) Pictorial - combination of three letters received at one time.

Multiple regression with parsimony, analysis of variance, analysis of covariance, and Duncan's multiple range test were used to determine significance.

Findings--Percent of newsletters read and pre-test score showed significant partial correlation coefficients of .409 and .300 with the total post-test score. They were used as covariates.

The analysis of mean post-test scores among dairymen receiving newsletters of different formats revealed no significant differences when the individual newsletter scores were compared. Neither were there any differences among the total post-test scores. There were no significant differences among test scores of dairymen receiving three pictorial newsletters at weekly intervals and dairymen receiving all of the same pictorial content at one time. Post-test scores of dairymen receiving newsletters were significantly higher at the .01 level, than scores of dairymen in the sample groups that did not receive any newsletters.

Thirty-five persons who read 75 percent or more of the material received in three newsletters had mean post-test scores of 20.5. Thirty-five persons who read an average of less than 25 percent of the material received had mean post-test scores of 15.9.

Dairymen 50 years of age and over had post-test scores significantly lower than those of younger dairymen. The four dairymen with 30 or more years experience in the group of 29 receiving the outline format had post-test scores significantly lower than the eight with less than 10 years experience.

No significant differences were found among post-test scores when the following independent variables were tested: education, status (full-time or part-time), percent off-farm employment, number of cows, future herd size anticipated, and plans for high-moisture corn usage in the future.

McCREIGHT, DONALD E. A Teaching Experiment in Occupations and Quality Control in the Processing of Meat. Thesis, Ph.D., 1969, The Pennsylvania State University. 145 pp. Library, The Pennsylvania State University, University Park.

Purpose--To develop, implement and evaluate a basic course for high school students with emphasis on two problem areas in occupations and quality control in the processing of meat. More specific purposes were to measure: (1) effects of the teacher's guide use on student learning; (2) effects of the instructional methods used in teaching occupations on student learning; (3) relationships of predictor scale values and criterion measures.

Method--Twenty-four schools were randomly assigned to four experimental treatment groups. Four hundred students were involved in the experiment. The experimental groups were: (1) teacher's guide, teacher class instruction of occupations and quality control; (2) teacher's guide, student self-instruction of occupations, teacher class instruction of quality control; (3) no teacher's guide, teacher class instruction of occupations and quality control; (4) no teacher's guide, student self-instruction of occupations, teacher class instruction of quality control. On the day the investigator delivered the instructional materials to each school, the students were administered the Meat Industry Attitude Survey, the Interest Preference Checklist, and a pretest on knowledge of occupations and quality control in the processing of meat. Teachers were requested to teach the units in twelve hours of class time. Following the treatments, students again completed the attitude, interest and knowledge tests.

Pre-test knowledge test scores and high school fifth were selected as covariates for the analysis of covariance to test for differences between student mean test scores. Correlated t-tests at the .05 level determined significant differences from pre-test to post-test for attitude and interest scores. Canonical correlations were determined between predictor scale values and criterion measures.

Findings--Students scored significantly higher, at the .01 level, on the two units when the teacher's guide was used. Students also scored significantly higher, at the .01 level, on the occupations unit when the teacher instructed the class.

Student post-test scores on attitude toward the concepts animal death, smoking meat, cold air temperatures and meat plant were significantly higher than the pre-test scores. Fat and grease, and humid, wet conditions post-test scores on attitude were significantly lower. Student post-test scores on interest were significantly higher for the occupational interest area of worker.

In the first canonical correlation, interest scores in the meat industry occupational areas of quality control, management, mechanics, office and sales, and worker were the predictor scale values that predicted the total interest test score. In the second canonical correlation, the predictor scale values of interest score in management, high school fifth, instructional method, and attitude toward smoking meat predicted the post-test scores on the two units of instruction. In the third canonical correlation, the predictor scale values of high school fifth, interest scores in quality control and office and sales, attitude scores toward knife and odor, retail meat work experience, and the use of a teacher's guide predicted the combined total test score.

30/31.

McMAHON, CAROL T. The Development of a 4-H Junior Leadership Manual: A Personal Growth Experience. Supervised Field Practicum, M.A., 1969, University of Rhode Island. 46 pp. Department of Education, University of Rhode Island, Kingston.

Purpose--The purpose of this practicum was to expand the writer's leadership ability through the development of a 4-H junior leadership manual. The specific objectives were as follows: (1) to become familiar with 4-H junior leadership manuals from other states; (2) to gain experience in determining the needs of 4-H junior leaders in Rhode Island; (3) to acquire experience in the preparation of a 4-H junior leadership manual.

Method--The following procedures were used: (1) junior leadership manuals were obtained from forty states and thoroughly reviewed by the writer; (2) the needs of 4-H junior leaders in Rhode Island were determined by means of a group discussion meeting with the junior leaders, by interviews with the State 4-H Leader, Rhode Island 4-H Agents and adult 4-H leaders; (3) the ideas secured from other sources were summarized and the manual prepared.

Findings--By completing this practicum the writer has gained experience in determining the needs of 4-H junior leaders as they recognize them, and as recognized by adults who work closely with the junior leaders. Experience has also been obtained in conducting interviews and leading small group discussions. Development of a 4-H junior leadership manual for Rhode Island was an exhausting but satisfying experience for me.

The following recommendations are suggested as a result of this practicum: (1) to assure the manual's maximum useability it would have been beneficial to have had several Rhode Island Junior Leaders utilize the manual for a trial period; (2) an in-service training workshop is needed to explain the use of the manual to the professional 4-H staff in Rhode Island; (3) a written adult volunteer leaders' guide is needed to explain the proper use of the junior leadership manual; (4) the junior leadership manual should be thoroughly explained to and tried out by a small group of junior leaders in clubs having no adult volunteer leaders.

MERCER, ROBERT JACK. An Evaluation of Inservice Teacher Education and Student Instructional Materials in Ornamental Horticulture. Thesis, D.Ed., 1969, The Pennsylvania State University. 155 pp. Library, The Pennsylvania State University, University Park.

Purpose--(1) To evaluate the effectiveness of teacher unit plans, student handbooks, and teacher institutes in six instructional areas in ornamental horticulture on student achievement and attitude and (2) to study the relationship of certain variables to the teaching of ornamental horticulture.

Method--Three treatment groups were used to compare selected combinations of instructional materials and inservice education: (1) students whose teachers received only a teacher unit plan, (2) students whose teachers received a teacher unit plan and a class supply of student handbooks, and (3) students whose teachers received a teacher unit plan, a class supply of student handbooks, and attended a teacher summer institute.

The teacher unit plans consisted of a suggested list of the major areas, teaching learning resources, supplies needed, student learning objectives, items of advance teacher preparation, key questions, demonstrations, and a 50 question multiple-choice test. Titles of the teacher unit plans and student handbooks tested were: (1) Poinsettia, Easter Lily, and Bedding Plant Production, (2) Nursery Production and Landscape Design, (3) Landscape Design Establishment and Maintenance, (4) Turfgrass Establishment, and (5) Turfgrass Maintenance. The two three-week teacher summer institutes consisted of one week of intensive instruction in each of these subject matter areas. Instructional materials and inservice education were also provided for retail flower shop operation and management.

Multiple choice achievement tests and semantic differential attitude tests were used to measure student learning and attitude. A 15-item scale was used to measure involvement of students in selected activities pertaining to each unit. Teacher pre-test and post-test scores were tested for significance by correlated *t*-test.

Findings--The teaching of each instructional area by teachers using a particular combination of inservice education and instructional materials resulted in a significant increase in student learning as measured by achievement tests.

No significant differences were found by analysis of covariance among treatment groups on achievement or attitude, except for the turfgrass maintenance area, in which the students were significantly lower in subject matter achievement. Only one school was available for testing on this unit.

Other findings were significant positive associations between (1) student involvement and attitude, (2) student attitude and intention of the student to enter an occupation or continue education in ornamental horticulture, and (3) student urban residence and intention of the student to enter an occupation or continue education in ornamental horticulture.

MITCHELL, LEONARD RALPH JR. The Development of an Emergency Health Services Plan for the Rhode Island Department of Health. Supervised Field Practicum, M.A., 1969, University of Rhode Island. 90 pp. Department of Education, University of Rhode Island, Kingston.

Purpose--The supervised field practicum was selected to gain personal growth and new learning experiences through the preparation of an Emergency Health Services Plan.

Method--The following procedures were used:
(1) meetings with various organizations responsible for health,
(2) meetings with the responsible Division Chiefs,
(3) informal meetings with the Director of Health and the Director of the Rhode Island Council of Defense,
(4) reviewing plans of various states and countries,
(5) writing the Emergency Health Services Plan, and
(6) meeting with individuals and groups responsible for health.

Findings--The objectives stated in the proposal for this practicum were achieved. (1) The Emergency Health Services Plan was written, approved, and published. (2) The writer gained knowledge of the Federal, State, and local health systems. (3) The author became familiar with the plans of other states and countries. (4) Unexpected "spin offs" appeared which may have value in improving the health system.

The writer suggests these recommendations as a result of this practicum: (1) Testing, evaluating, and revising of the Plan. (2) Maintaining basic information on the location and the inventories of health and water resources. (3) Developing an alerting system. (4) Continuing training in radiological monitoring and sampling, personal and family survival, and damage estimation. (5) Training of responsible hospital officials in usage of Packaged Disaster Hospitals.

OTTAVIANO, AMERICO A. The Recruitment of Students for Post-Secondary Vocational-Technical Education: A Personal Learning Experience. Supervised Field Practicum, M.A., 1969, University of Rhode Island. 48 pp. Department of Education, University of Rhode Island, Kingston.

Purpose--To gain experience in the process of recruiting students for post-secondary programs of vocational-technical education in order to become knowledgeable in one phase of education at the administrative level.

Method--The procedures employed were: (1) Organized meetings with fellow faculty members to discuss improvement and coordination of recruitment. (2) Became familiar with current programs, catalogs and literature, and prepared additional bulletins. (3) Visited high schools for discussion of programs offered. (4) Interviewed students who had made formal application for enrollment. (5) Analyzed and discussed, with administrators and faculty members, the qualifications of applicants. (6) Utilized a survey questionnaire to determine student opinion on recruiting methods.

Findings--The writer has developed a greater awareness of the difficulty students encounter in choosing a program of study in technical education based on the meager information available to them. Administrators, counselors, and teachers at the high schools do not have sufficient knowledge of the opportunities available in this field. The following recommendations are suggested as a result of this practicum: (1) Continuing effort must be exerted by administrators and faculty at the junior college to acquaint secondary school personnel and students with vocational-technical education. (2) Students presently enrolled should participate in the recruitment process. (3) Core curriculums should be studied and considered for implementation as a means of deferring definitive choices of programs.

PEIRCE, HARRY EDGAR, JR. The Development and Evaluation of Farm Management Instructional Units for Young Adult Farmer Education. Ph.D. Thesis Study, 1969. Cornell University. 174 pp. Department of Agricultural Education, Cornell University, Ithaca, New York.

Purpose--The major purpose of this study was to develop and measure the effectiveness of instructional units designed to enable young adult farmers to improve their ability to use farm management principles when making decisions. A secondary purpose was to measure the influence that independent variables have on the young adult farmer level of understanding farm management principles.

Method--The instructional units were developed by the researcher and revised according to suggestions made by a jury of consultants.

Twenty-eight experienced young farmer teachers with a farm management emphasis in their curriculum were selected to appraise the effectiveness of the units. Stratified random sampling procedures were used to assign each teacher to one of the three groups: Experimental A, Experimental B, and Control C. Teachers in Experimental Group A used the prepared instructional units after receiving in-service training instruction on their use. Experimental Group B used the units without the benefit of prior instruction and Control Group C taught farm management by using the traditional techniques.

McCormick's testing instrument for measuring "Seven Profit-Maximizing Principles" was revised slightly to measure the young adult farmer understanding of farm management principles. Differences between mean post-test scores for each group were tested for significance according to one-way analysis by the F test.

Questionnaires were also submitted to determine the young adult farmer and teacher reaction to the instructional units.

Findings--There was a small difference--statistically significant at the .05 level--in favor of Group A over Group C. Group B ranked second but not significantly higher than Group C.

Three independent variables had a positive major influence on post-test scores. Students with the most formal education and managerial responsibility and best attendance at the farm management meetings, had a better understanding of farm management principles.

Three other independent variables had a minor influence. Students who were older, married, and with more years of managerial responsibility scored higher on the farm management exam.

Teacher and student reaction to the units, as measured by questionnaires and an evaluation meeting, was very favorable.

PENNINGTON, FORREST MASON. Developing A Public Relations Program in Vocational Agriculture. Problem, M.S. 1968, West Virginia University. 63 pp. Library, West Virginia University, Morgantown.

Purpose--The purpose of this study was to find out what types of media were being used in the public relations programs in vocational agriculture departments of high schools in West Virginia and how twenty-four different media compared to each other. Also, a comparison of the relationship of the vocational agriculture teachers with the key personnel in three of the top mass media, namely, radio, television, and newspapers.

Method--Questionnaires were sent to ninety-five vocational agriculture teachers in West Virginia. These questionnaires contained twenty-four different media; and nine questions pertained to use and ranking of these media. The collected data are displayed in tabular form and prose description.

Findings--The survey showed, as to the total times used, that parents were utilized most and newspapers second. The ten top media which teachers used ranked in order of importance on a weighted score basis were: newspapers, parents, Vo-Ag community service, FFA program of work, local bankers, adult farmer class, principals of high schools, other high school teachers, high school news publications, and radio. There is a definite need for vocational agriculture teachers to be acquainted with the key media personnel.

Conclusions drawn from the survey of the Preston County High School Principals and the County Superintendent would indicate that they use all twenty-four different media to tell the vocational agriculture story; however, some media were selected more often as a first choice. They are as follows: newspapers, parents, local businessmen, other teachers, chapter calendars, radio, industry employers, FFA scrapbook and television.

PITZONKA, WALTER W. JR. The Construction and Use of a Portable Plant Growth Environment Chamber in Schools. Thesis, M.S., 1969, The Pennsylvania State University. 62 pp. Library, The Pennsylvania State University, University Park.

Purpose--To design, construct, and test a low-cost portable plant growth control chamber, and to select a group of experiments which could utilize the chamber in secondary school courses.

Method--A growth chamber design was developed to fulfill the objectives. Construction of the growth unit was followed by testing of the chamber's capability for lighting, heating, and cooling. Based on testing, suggested modifications in the design were prepared. With the known capabilities of the chamber, a selection of experiments was incorporated into a unit for use by students in secondary school courses.

Findings--The study found that a portable growth chamber could be constructed at low cost to fulfill the needs of the classroom. The control capabilities for cooling and heating were limited by the construction. Suggested modification in the growth chamber's design would increase the effectiveness of these capabilities.

In testing the phytotron's cooling capability it was noted that when the room's relative humidity was lowered greater cooling occurred. The heating capability of the phytotron showed that when the room temperature was lower than 10 degrees than the desired temperature in the chamber, there would be need for additional heat.

The seeds started under the combination of fluorescent-incandescent light germinated slowly but ultimately produced better plants. The plants grown under similar light exhibited the best vigor and healthiest color.

The suggested 17 experiments recommended would allow students to personally conduct classroom tests and observe the many ways environment affects plant growth. The environmental factors being tested would include light, temperature, humidity, soil moisture, soil acidity, and soil types or mixtures.

POTTER, MARGARET L. Learning Experiences Attained in Developing an Orientation Program for 4-H Leaders. Supervised Field Practicum, M. A., 1969, University of Rhode Island. 28 pp. Department of Education, University of Rhode Island, Kingston.

Purpose--To increase the writer's proficiency in leadership development by: (1) gaining experience in the participation planning process; (2) gaining experience and self-confidence in using group methods; (3) increasing my ability to make use of human resources; and (4) learning to use one or more evaluation techniques.

Method--Small groups of new adult volunteer leaders were assembled in an informal setting, in order to provide a climate in which they could identify their needs and seek ways of meeting some of these. Four meetings were held in three different areas, with a total of nineteen leaders attending. Content and form of the meetings were determined by the leaders in attendance. Group techniques used included a get-acquainted device, brainstorming, group discussion, interview, visual aids and written and verbal forms of evaluation. Available human resources were used, including a former 4-H member and leader, an experienced leader and an out-of-state leader and dietitian.

Findings--Upon completion of the practicum, the writer has developed a more permissive approach toward working with people, has gained experience in planning and conducting small group sessions, has achieved more confidence in the use of group methods, and possesses a keener awareness of the importance of involving resource people in the program.

Recommendations: (1) There is a need for informal area meetings of the type conducted in this practicum, not only for new leaders, but for all 4-H leaders in the Northern Rhode Island District. (2) I would not tell a group that they are part of a graduate field practicum. Knowledge of this fact hampered the free expression of ideas. (3) Experienced volunteer leaders make better resource people for new leaders than do professional staff members. (4) A small, home meeting of the type held during this practicum needs to be kept casual. (5) Since increased numbers of volunteer leaders are now working, or have small children, it is difficult to find a convenient time for them to attend training meetings. These suggestions are offered in connection with this problem: (a) Program aides could be hired to do some of the jobs that volunteers are now doing. (b) The responsibility of leadership could be shared. (c) People with special skills could assume short-term leadership jobs.

REID, JAY MARTIN. The Impact of Agricultural Instruction Upon Attitudes and Vocational Preferences of Secondary School Students in Kenya. Thesis, M.S., 1969, University of Maryland. 86 pp. Library, University of Maryland, College Park.

Purpose--To determine (1) the extent of attitude change among secondary school students in Kenya following a course of instruction in the principles and practices of agriculture, and (2) the extent to which students who select agriculture as a vocation evidence interest in agricultural related activities.

Method--Data were collected from among seven schools participating in a contract between the Government of Kenya and the United States Agency of International Development through which a four-year program of agricultural education had been initiated in the secondary school system. Data were also taken in a control school which did not offer agriculture. Two instruments, an attitude inventory and a vocational preference scale, were used in collecting the data from the total population participating in the program. The data were then analyzed by a t-test of significance between the four levels in the total contract schools and the four levels of the total contract schools compared with a control school.

Findings--(1) There was no significant difference in attitude change between Form I and Form II students or between Form I and Form IV students in the contract schools. (A mean score of 2.38 was observed for the students of Form I compared to mean scores of 2.34 for students of Form II and 2.36 for students of Form IV.) (2) There was a significant difference in attitude between Form I and Form III students in the contract schools. (3) When contract schools were compared with the control school, no differences were found between Forms II and between Forms IV. A significant difference was found between Forms III, however, due to a significant difference between Forms I, it was not possible to draw conclusions. (4) There was greater tendency among students who selected agriculture as a vocation to choose agriculturally related activities from a preference scale after taking a course in the principles and practices of agriculture. There was an increase in the selection of agriculturally related activities of 1.1 activities of Form IV students over Form I students.

ROBINSON, GEORGE A. In-Service Education for New York Teachers of Agriculture in the Specialized Instructional Area of Agricultural Mechanization. Thesis, Ed.D., 1969. Cornell University. 218 pp. Library, Cornell University, Ithaca, New York.

Purpose--This study was conducted to identify teacher needs for more effective instruction in agricultural mechanization and to recommend a program of in-service education which would enable teachers to provide students in this specialized area with essential and adequate learning experiences for entry-level employment.

Method--The five objectives for achieving this intent were: (1) what was the relationship between teacher perception of the extent that competencies (skills) were used by mechanics in farm equipment dealerships and the extent that persons in dealerships (owners, managers, or shop foremen) say they were used? (2) What was the relationship between teacher perception of training needed by persons to perform at the entry-level as a mechanic in farm equipment dealerships and the training which persons in dealerships (owners, managers, or shop foremen) expected of beginning (entry) workers? (3) What was the relationship between teacher estimate of their training needs and the training which persons in dealerships (owners, managers, or shop foremen) estimated was needed to more effectively teach agriculture mechanization students for entry-level jobs? (4) What was the relationship between observed and expected technical and skill training needs of teachers to more effectively teach agricultural mechanization students for entry-level mechanical jobs in farm equipment firms? (5) What was the relationship between the professional education needs reported by teachers for teaching agricultural mechanization and the needs which teacher educators and state supervisors reported were needed?

Three survey instruments (Part A, Part B, and Part C) were required to secure the data used in testing the hypothesis for each objective. The first two, entitled, Competencies Needed by Workers Performing Mechanical Tasks on Farm Equipment, contained identical items and were used to assess teacher needs in technical education. Part A was mailed to a select sample of New York farm equipment dealers and Part B to a select sample of agricultural mechanization teachers and production agriculture teachers. The third instrument, Part C - A Program of In-Service Education for Meeting the Professional Education Needs of Teachers in the Specialized Instructional Area of Agricultural Mechanization, was mailed to New York teacher educators and state supervisors for agricultural education in addition to the sample of agriculture teachers.

For each item on the questionnaires, respondents selected one of three possible choices. Responses were tabulated by categories and chi square used to test their significance. Part A and Part B data were used in testing the first three hypotheses; Part B, hypothesis four. Part C information was used in testing the hypothesis for objective five.

Findings--Significant differences existed between dealers' and teachers' responses in 45 of 101 instances concerning extent of competency use. Concerning the extent of training needed by entry-level mechanics, differences existed for 25 of 101 items about technical knowledge and 35 for skill development. Agreement between dealers and teachers was noted for additional training needed by teachers except for 3 of the 101 items

on technical knowledge and 5 for skill development. According to the significant differences between their observed and expected responses, teachers needed additional training in 47 of the 101 competency items. From the 72 items related to professional education needs of teachers, a total of 15 were significant.

The following conclusions were drawn from this study.

1. Based on the percent of significant items, teachers tended to perceive that competencies were used to a greater extent in farm equipment firms than was actually the case.

2. For the most part, dealers did not expect entry-level mechanics to be as extensively trained as teachers perceived they should.

3. Nearly perfect relationship existed between teacher estimate of additional training needed in technical education (technical knowledge and skill development) and dealer estimate of teacher needs.

4. With the exception of the exhaust system, each system or area into which the study was divided contained competencies (skills) in which teachers needed additional training.

5. Although teachers had needs in professional education, they were not as extensive as their needs in technical education.

SMELTZ, LE ROY C. An Analysis of Occupational Titles and Competencies in Agricultural Food Products Processing Plants. Thesis, D.Ed., 1969, The Pennsylvania State University. pp. Library, The Pennsylvania State University, University Park.

Purpose--To provide information which would aid teachers of vocational agriculture, guidance counselors, school administrators, and teacher educators in planning future high school, post-high school and college programs of occupational education in the area of agricultural food products. The study determined the differences between To Enter and To Advance competency factor scores and identified competency factors, occupational title groups, most desirable experience backgrounds, and the most desirable formal educational level at entry for employees.

Method--A survey schedule to identify occupational titles and competencies needed for the different occupations was developed. Five large processing plants in each of the five commodity areas of meat, dairy, poultry and eggs, fruits and vegetables, and cereal grains and flour were visited. The personnel manager or general manager was interviewed and asked to rate the importance of each competency at the To Enter and To Advance levels for each occupational title.

Factor analysis was used to group the competencies and occupational titles. Standard deviation units were used to classify the competency levels as high, medium or low.

Findings--There were five meaningful competency factor groups in each of the five commodity areas. In the meat and dairy processing plants the competency factor groups were management and supervision, quality control, sales and business skills, mechanics, and processing skills. The competency factor groups in poultry and egg processing plants included a factor for distribution. In fruit and vegetable processing plants a raw product procurement factor appeared. In cereal grain and flour processing plants procurement, storage and distribution was combined in one competency factor group.

There were meaningful occupational title groups in each commodity area. The occupational groups which appeared most often were: worker, mechanic, office worker and salesman, quality control technician, manager, production supervisor and truck driver.

Ratings of competencies needed by occupational title groups were significantly higher at the To Advance level than at the To Enter level in 77 percent of the cases in meat and dairy processing plants, in 68 percent of the cases in poultry and egg processing plants, approximately 47 percent of the time in fruit and vegetable processing plants, and 27 percent of the time in cereal grain and flour processing plants.

The data indicated that managers place little emphasis on experience background when considering prospective employees. In 79 percent of the cases the managers indicated no preference in experience background for entry employment in the five commodity areas.

A four year college education was most desirable for the managerial occupational titles, quality control technicians, and plant engineers. For the occupational titles office manager, bookkeeper, inspector, maintenance mechanic, and quality control technician a two-year post-high school technical education was desirable. A high school education was desirable for the occupational titles of salesman, worker, processor, truck driver, buyer, mechanic, and production supervisor.

TENNEY, RICHARD W. IFYE Alumni: The Conception and Performance of Roles Promoting International Understanding. Thesis, Ph.D., 1969, The Pennsylvania State University. 97 pp. Library, The Pennsylvania State University, University Park.

Purpose--To determine correlation and interaction of both personal and program characteristics of alumni of the International Farm Youth Exchange with measures of importance and performance in roles promoting international understanding. The IFYE program is based on a foreign rural cultural living experience and is administered by the National 4-H Club Foundation. A first report on this study (Tenney, 1967) dealt with the influence of the IFYE experience on subsequent education and occupations of the alumni.

Method--A schedule was developed and mailed to 94 national IFYE applicants who had not become participants in the IFYE experience and to 570 IFYE alumni. There were responses from 63 and 474 alumni, respectively. The period covered was 1947 to 1962. The main statistical treatment used least squares multiple regression for a single equation stochastic model. The dependent variables studies were role importance and role performance.

Findings--The development of IFYE alumni roles began with assistance in IFYE program maintenance and development. From that point it moved through "junior leadership" to establishing pen-pals and by 1962 to involving citizenship-leadership activities. Recent role development has more clearly spelled out alumni role expectations in relation to leadership and responsibility in projects dealing with rural youth development and world food production.

There was no significant association of current self-conception of role importance with having had IFYE experience. There was significant correlation between role performance and IFYE experience, with the IFYE Experience Group performing at a higher level. There were significant changes between 1962 and 1967. Both role importance ratings and performance percentages increased.

Importance ratings and performance percentages were significantly higher for the alumni of the continental area of Latin America and those who are currently working in international type occupations. The variables of state represented as an IFYE delegate, community participation, and level of education were all positively correlated with role importance but none were correlated with role performance. There was significant interaction of the variables Occupation with the Chapin Scale and Occupation with Education for role importance and the variable Occupation with Education for role performance.

There was no significant differences in leadership and resource capacities for either role importance ratings or role performance percentages. It was observed that IFYE alumni currently see themselves more often as leaders in role promoting international understanding than they have in the past, but at the same time they are failing to utilize an appropriate portion of the opportunities for performance of international service projects.

UMSCHEID, SYLVESTER C. The Life History as a Predictor of Leadership Potential. Thesis, M.S., 1969, University of Maryland. 108 pp. Library, University of Maryland, College Park.

Purpose--To further refine a life history instrument used in previous studies believed to have potential use in programming, adult leader selection, training, and identification of leadership potential.

Method--Subjects were 83 boys and 157 girls from five states who participated in the Citizenship Short Course conducted by the National 4-H Foundation during July, 1969.

Statistical treatments included chi square contingency tables, eta coefficients, Pearsonian Product Moment correlations and associated F-tests and 5-tests to determine the significance of the correlations.

A cross-validation group was provided by dividing the subjects into two equal groups based on age and sex. Validity coefficients for prediction purposes were determined by cross-tabulating 57 life history items with 10 biographical leadership criteria items.

Findings--Using the refined questionnaire 121 correlations between life history and biographical items were found in group I. Sixteen of these correlations were supported in the cross-validation group.

Fifteen different life history items were found to be correlated with one or more biographical items yielding validity coefficients ranging from -.42 to +.38.

It was concluded that these items should prove of practical value for prediction purposes.

WALDMAN, JOSEPH R. A Personal Learning Experience in Teaching a College Class. Supervised Field Practicum, M.A., 1969, University of Rhode Island. 28 pp. Department of Education, University of Rhode Island, Kingston.

Purpose--The purpose of this practicum was to provide the writer with an opportunity to acquire actual experience in the role of a college teacher.

Method--The following procedures were used: (1) approval was obtained from the Chairman of the Department of Journalism at the University of Rhode Island to observe and teach a journalism class; (2) during a three month period, the writer participated in sessions of Journalism 122 and observed Professor Doctor; (3) the writer took the place of the professor for designated class sessions.

Findings--The objectives stated in the proposal for this practicum were achieved. The writer gained personal growth and learning experiences associated with teaching a college course in journalism. The learning experiences included: (1) a better understanding of the utility of teaching techniques other than the lecture; (2) a reinforced awareness of the importance of preparation in depth and up-dating in the discipline or subject to be taught; and (3) a new appreciation of the difficulty of inspiring and sustaining fruitful discussion in the classroom by the method of posing key questions, properly phrased and timed. Overall, the practicum produced data which will prove helpful to the writer in evaluating his potential for college teaching.

As a result of the experience gained in this practicum, the writer would introduce several changes in undertaking the project a second time. In the matter of teaching techniques, he would place greater emphasis on variety. In the scheduling of the project, more lead time would be incorporated to facilitate preparation.